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DECEMBER, MDCCCLV.

THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY

AND

JOURNAL FOR RECORDING FACTS & ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES,
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

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'The Zoologist.'

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• EDWARD NEWMAN, 9, Devonshire Street, Bishopsgate.

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All Communications promptly attended to by **JAMES GARDNER**, late of Great Marlborough Street.

Deer feeding on the Fruit of the Horse-Chestnut.—It is said that the Turks grind (or perhaps crush) the fruit of the horse-chestnut, and give it to horses to improve their wind, whence the name *horse-chestnut*. In this country these nuts are generally deemed useless, and I was not aware they were eaten by any animals till I had ocular demonstration of the fact. Many years ago I was waiting in the churchyard within a nobleman's park, when several deer came up to a horse-chestnut tree not many yards distant from me, and not only picked up the nuts from the ground, but also gathered those on the lower twigs. Moreover, one buck certainly, perhaps more (I do not now recollect the precise number) thrust his horns into the tree, and rattled the boughs about till he had shaken down some of the fruit otherwise beyond his reach. Hard as the nuts are, the deer champed them up with little apparent difficulty, and decidedly as if they were a treat.—*Arthur Hussey; Rottingdean, October, 1855.*

Occurrence of the Creamcoloured Courser on Salisbury Plain.—I have just received a very rare bird to stuff for Mr. Walter Langton, who shot it on East Down, Salisbury Plain, on the 2nd of this month (October): it is the creamcoloured courser (*Cursorius isabellinus*). Mr. Langton was following a wild covey of birds which had pitched on the open down, when his pointers stood at this bird: it got up, flew about a hundred yards, and pitched again: he kept it in sight and shot it on the ground. Mr. Yarrell had the bird to examine in the flesh; he was much pleased with it, and will figure the breast-bone in a Supplement to the 'History of British Birds,' which he is now preparing.—*James Gardiner; 426, Oxford Street, October 30, 1855.*

Note on the Common Night Heron.—It has been remarked that in very old birds of this species the number of occipital plumes increase. The usual number seldom exceeds three, and I have observed this number in several examples where the state of plumage exhibited perfect maturity. It is, however, very probable that, without depending either upon age or sex, the number of plumes now and then exceed three; I have heard of one specimen, which came under the notice of Mr. Vingoe, having six. Yesterday I examined a specimen, killed a few years since in the Lizard district, at the same time and in the same locality that afforded me a very beautiful male specimen in perfect plumage, which had three well-defined snow-white plumes. The example now under notice is scarcely so bright in plumage as my bird, but quite adult; but the number of plumes that adorn the head is no less than *ten*; one or two of them are rather shorter than the rest, but differing in no other particular.—*Edward Hearle Rodd; Penzance, October 27, 1855.*

Occurrence of a supposed new Wrasse and other Fishes in Swanage Bay.—Whilst dredging the other day in Swanage Bay I took a wrasse, a description of which I enclose, in hopes that some of your readers may be able to tell whether it is a new species or only a variety of *Labrus Comber* (Yarrell, vol. i. p. 323) or of *Labrus Donovanii* (Yarrell, vol. i. p. 315). It was of a slender form, bright olive-green on the back and head, lighter on the sides, and silvery on the lower part of head and belly; a silver streak runs from the superior edge of the orbit to the tail, beneath and following the lateral line; the fins shaded and tipped with orange. Length $2\frac{1}{2}$ inches.

Fin formula, D. 20 + 10 : P. 14 : V. 1 + 5 : A. 3 + 8 : C. 14. Within the last two days I have also taken specimens of the æquoreal pipe fish (*Syngnathus æquoreus*, Yarr. ii. 442), green-streaked wrasse (*Labrus Donovanii*, Yarr. i. 315), Montagu's sucking fish (*Liparis Montagu*, Yarr. ii. 374). Of the last fish Mr. Couch says it never attaches itself to any fixed substance: the specimen I had certainly did, both to the wood of a pail and to the side of a glass bottle.—*Lester Lester ; Langton Maltravers, Dorset, October 3, 1855.*

[The small size of the wrasse implies its youth, and it seems not improbable that it may be the young of the comber wrasse (*Labrus Comber*), a fish which agrees with Mr. Lester's in its slender proportion: this species is of excessive rarity, and its occurrence in Swanage Bay is of great interest.—*Edward Newman.*]

The supposed new Flounder.—Enclosed I send you a more lengthened description of the black flounder than that originally communicated. I have this summer obtained three more, and am more convinced of its being distinct: they are from the same locality as the others. The length of the head is to the whole length of the fish as 7 to 31; the greatest width of the body without the fins is to the whole length as 1 to 3½. Mouth small; one row of small teeth in each jaw. Lateral line very slightly curved over the pectoral fin, and marked with numerous rough stellated tubercles at its commencement, some more of which are continued below the lateral line as far the widest part of the fish. Scales small. Dorsal and abdominal lines armed with a series of denticulated tubercles, one in each space, between the rays. Upper eye rather the largest, and placed rather more backward than the lower. A strong, prominent, tuberculated, bony ridge between the orbits, the tubercles being continued in a curved line to the commencement of the lateral line. *Pectoral and ventral fins longer and more pointed than in the common flounder* (*Platessa Flesus*); *dorsal fin commencing on a line with the posterior edge of the lower eye*, extends almost to the tail; ventral fin nearly on a line with the margin of the operculum; anal fin preceded by a spine directed forwards, commences considerably further back than in the plaice, and terminates on the same plane as the dorsal. Fleshy portion of tail narrow; its rays more elongated than in *P. Flesus*; the four central rays longer than the rest. Fin rays in number are—dorsal 57—59; pectoral 10; ventral 6; abdominal 41; caudal 18. *Colour almost black on both sides. Dorsal line recurved so as to form a notch above the eye.* Seven specimens have been examined by me, and in all of them the characters (which are underlined) distinguish this species from the *Flesus*. I do not lay undue stress on the colour, as *varieties of all colours are met with* amongst the other *Pleuronectidæ*; but when, associated with it, I find so many points in which it differs from the common flounder, I think myself justified in regarding it as a distinct species.—*Edmund Thomas Higgins ; Birkenhead, October 13, 1855.*

[Unwilling as I always am, and always shall be, to damp the ardour of discovery or oppose opinions advanced by my correspondents, yet I feel myself in some respect culpable if I allow opinions to go forth without comment after I have had reason to doubt their soundness. I have taken great interest in the subject discussed by Mr. Higgins; and have submitted the whole of the evidence to Mr. Yarrell: I have also spoken to several fishmongers on two points, the notch above the eye and the black colour of the under side; and I learn, 1st, that it is a favourite trick of the fisher-boys to cut a notch just in the place indicated when they catch a flounder too small to be saleable; and they do this in order to be able to recognize it when caught

a second time: the cut is a simple incision, but both edges recede in healing, and thus the notch is formed; and 2ndly, that variation in colour, as both sides white, both sides black, and one or both sides piebald, is not extraordinary. Mr. Yarrell has a specimen with the natural colour on the wrong side, not a dextral flounder, but looking to the left like a Rhombus. Seeing, then, that the notch is artificially caused, and that the altered point of the commencement of the dorsal is a consequence of the mutilation, and seeing also that the colour is a mere *lusus* or freak of nature, we have only the altered form and greater length of pectorals and ventrals to deal with; and here I confess that there appears a marked difference, but whether sufficient for the establishment of a new species it requires a far more skilful ichthyologist than myself to decide.—*Edward Newman.*]

Double-broodedness of Gonepteryx Rhamni.—I did not think I should have raised such a controversy when I made a few remarks on the question whether *G. Rhamni* be double-brooded or not. All that I will positively contend for is that there are two periods of the year, viz. the early spring and July, August, &c., when the butterfly is on the wing in a perfectly fine and bright condition. Mr. Greene, I think, must have been singularly unfortunate in his collecting excursions; for he states (*Zool.* 4872) that "though he has captured dozens, and seen hundreds on the wing at that season [the spring] he has never been fortunate enough to take one worth placing in his cabinet." I should hardly have thought it worth while to say another word on the subject had it not been that Mr. Greene asks, with an air of considerable confidence, as if the question could not be answered in the affirmative, "Has any entomologist ever seen *G. Rhamni*, fine or otherwise, on the wing either in June or July? It would be presumptuous in me, on my own individual authority, to deny positively that it has been so seen; but I have collected in Yorkshire, Gloucestershire, Buckinghamshire and Suffolk, and I can confidently affirm that, as far as my acquaintance with those counties extends, *G. Rhamni* has never been on the wing in June or July." Now this statement does appear to me to be passing strange, having myself seen *G. Rhamni* on the wing repeatedly in each of these months. On referring to my 'Calendar of Nature,' kept for many years, I find the appearance of *G. Rhamni* recorded on the 5th, 18th, 21st, 22nd, 24th, 29th, 30th and 31st of July; and to several of these entries I had, in my simplicity added "2nd brood," because the spring appearance of the insect had been previously recorded for the same year. The June appearances have not been recorded in my 'Calendar,' for this obvious reason,—I considered them as belonging to the spring flight which had already been noted. I have had no opportunity of tracing the insect from the egg or caterpillar state, like some more favoured entomologists. *Rhamnus catharticus* does not occur in this immediate neighbourhood, and though *R. Frangula* does, I have often examined this shrub for the caterpillar of *G. Rhamni* in vain. The butterfly itself, too, like several others, has become comparatively scarce in this neighbourhood. In conclusion, I would merely throw out a suggestion for the consideration of some more fortunate entomologists, especially Mr. Doubleday, who appears to have traced the insect from the very laying of the eggs. May not some of the later-bred caterpillars turn to chrysalis and remain in that state through the winter, making their appearance in the winged state in the early spring? Should this be so, it would account for the fine condition in which

many of the vernal specimens do certainly appear.—*W. T. Bree; Allesley Rectory, October 22, 1855.*

Memorandum on Gonepteryx Rhamni.—The specimen of *G. Rhamni* which I took on the 10th of September (see Zool. 4871) I placed in a large box with a wire gauze door: it remained attached to the side of the box for about a month, when it died and fell to the bottom.—*C. R. Bree; Stricklands, Stowmarket, October 20, 1855.*

Captures of Lepidoptera at Brighton.—On September 15th a fine female specimen of *Ennomos alniaria* was attracted by the light to this Hospital, and is now in my collection. I have likewise taken during the past year—*Acronycta Auricoma*; one *Diphthera Orion*; five *Phlogophora empyrea* at sugar, three of them worn; one *Leucania musculosa* (of this I have sent previous notices to the 'Zoologist'); *Agrotis saucia*; one *Agrotis obelisca*; several *Dianthæcia conspersa*; several *Hadena lutulenta*; one pale var. of *Aporophila australis*; three *Ennomos illustraria*, one bred. Among the Tineidæ I took about fifty of *Nemotois scabiosellus* in July and August.—*John N. Winter; Sussex County Hospital, Brighton, October 20, 1855.*

Occurrence of Mononychus Pseudacori in the Seeds of Iris fœtidissima.—I have just met with a few specimens of *Mononychus Pseudacori* in the seeds of the *Iris fœtidissima* (not *Iris pseudacorus* as given in Stephens), and one of them presents the peculiarity of having the club of the left-hand antenna testaceous, like the other joints, while that of the right is black as usual. I do not remember meeting with a similar instance in that or any other species.—*George Guyon; Ventnor, Isle of Wight, October 25, 1855.*

Curious effect of a Magnet on Flies.—Just after I last wrote to you I observed in the 'Illustrated London News' the remark of a correspondent that a magnet, armed with a piece of iron in the usual way, which was suspended in his study, was carefully avoided by the flies, though they often settled on pieces of iron in the neighbourhood, and if their flight happened to take them near it they immediately turned away. It is well known that wherever a current of magnetism is established a current of electricity exists at right angles to it; this electricity, in the case of powerful magnets, may be developed in the form of sparks or shocks, and it seems to me not impossible that the delicate organization of an insect may be sensitive to the electricity circulating round a small magnet which to our grosser natures is imperceptible. I placed the needle of of a compass, the only magnet at hand, on the table, and a fly presently paraded along it with the most contemptuous indifference—the circuit, however, had not been completed. This discovery, if proved, might perhaps be turned to account, and it would be a boon in tropical climates if the mosquito-curtains could be superseded by magnetized bed-posts.—*Id.*

Notes on the Dytiscidæ. By JOHN CURTIS, Esq., F.L.S.

I AM glad to find that Mr. Clark has commenced his labours preparatory to a monograph, I trust, upon the water-beetles of these islands—a tribe which it is impossible to study, with any degree of satisfaction, from the works of Marsham and Stephens.

There can be no doubt that when this fine family becomes a more universal favourite with entomologists, that many species, rare or even unique in our cabinet, will be procured in abundance, and new species will be detected; but I think we can never expect to find, as was intimated in the last number of the 'Zoologist,' a very considerable number which are natives of France and Germany. It is geographically improbable: nearly the whole of France is to the South of England: the country (viz. two or three degrees) beyond a line drawn from Bordeaux eastward, either skirting the Pyrenees or bounding the Mediterranean, where African types are far from uncommon. France also stretches to the Rhine and Rhone on the East, and as far West as any part of England. France may therefore be presumed to produce most, if not all, of the species found in this country, as well as a very large amount of Austrian and Italian Coleoptera, which we may look for in vain in our island. Our advantage, if any, over the fertile and varied soil and climate of France must be sought for in the North, where, from recent researches, it appears that the Fauna of Scotland is identical with that of Sweden, and in Ireland, which extends much farther West than any part of France or even of Europe.

In viewing this subject impartially and correctly, it will be seen, by referring to other orders and families, that Great Britain cannot compete with France in her entomological productions; for instance, our Heteromera will scarcely fill a drawer, whilst those of France of themselves form an extensive collection; and our poverty is still more manifest in the Buprestidæ, Lamellicorns and Longicorns. Again, if we turn to the Lepidoptera, we shall find France far richer than England. The amount of Papilionidæ must be treble that of ours, whilst *Artaxerxes* and *dispar* are the only species we can boast of that are not natives of France. In 1830 I saw on the wing and captured in central and southern France, in an excursion of two months, fifty-one butterflies I had never seen alive before, and it has struck me as a remarkable fact, that whilst in the South of France one finds almost a tropical Fauna as regards insects, the species of the North of Europe are also very abundant, as at Pau, in the Basses Pyrenees, Toulouse, &c., where the *Carabidæ*, *Curculionidæ*, &c., of Great Britain are the most common.*

It is therefore to the Lakes of Scotland and Ireland I expect that

* It was only last year that my friend M. C. Delarouzée took *Pytho depressus* near Caunteret.

we must look for new water-beetles. Dr. Power, Mr. Babington, and others have well searched the Fens of Cambridgeshire; portions of Yorkshire were diligently investigated by the late Mr. Rudd; and I devoted much of my time in my youth to explore the marshes and broads of Norfolk, especially those of Horning and Wroxham. From my success in the Lake districts of England in 1827, I would strongly recommend a good examination of the Lakes of Cumberland and Westmoreland, not neglecting the brooks and rills around Ambleside.

As regards the mode of collecting water-beetles, Mr. Clark's instructions are so complete that I need not enter upon my own practice, except to say that the *rejectamenta* left by floods in the early spring, and sometimes collected on the surface of still waters and eddies near mill-pools or in the angles of rivers, produce a rich harvest of water-beetles, Carabidæ, Staphylinidæ, &c. In setting specimens for collections I would recommend an example of each species to be placed on its back, as the under sides often exhibit peculiar characters of structure and sculpture which have been neglected in this family, where I believe they will be found more than usually characteristic. As the elytra of these beetles are so smooth that they are easily detached when affixed on their backs, a drop or two of nitric acid may be added to the gum to make it more tenacious, which is the basis of the powerful liquid glue of Paris called "Colle forte."

As Mr. Clark invites criticism and solicits information, I will now proceed to contribute what I think may forward his object.

Such vague indications of localities as "Norfolk, Suffolk, &c.," so frequently occurring in our entomological works being useless to the collector, I will subjoin what I can supply from my catalogues, confining my remarks to the rarer species. It may be useful to state that all such notices relating to the above counties which are inserted in the 'Manual' and 'Illustrations' of Stephens were obtained from Mr. Burrell's 'Catalogue of Insects found in Norfolk,' from myself previous to 1824, and from Mr. Kirby's MSS. Mr. Burrell explored the neighbourhood of Letheringsett, near Holt; Mr. Kirby's collecting was confined principally to Barham, Martlesham Heath and the country on that side of Ipswich; and my own researches extended eventually over the greater portion of the two eastern counties. Much uncertainty must exist as to the localities registered by Mr. Stephens, from the fact that the specimens in his cabinet are, to a great extent, incorrectly named; they often do not agree with the descriptions; a very considerable number in the more extensive genera, which bear the names of Gyllenhal and other continental authors, are merely

varieties of our commonest species; and occasionally different species stand under one name, or the same species is located in even different genera: with such incorrect data, it is scarcely safe to rely upon any of the localities, excepting those which are distinctly stated to have been communicated by the captors.

Having for many years kept a journal which was incorporated annually in catalogues of all the orders, extending to four quarto volumes, specifying the localities and dates of capture of each species, as far as the knowledge of my friends and my own experience enabled me, I can speak with tolerable confidence, except in some instances where the names have been transposed from the late unsettled state of our nomenclature; but with regard to the rarer species, the data have been recorded by me with the greatest care, and may therefore be depended upon.

Accuracy is most essential in every branch of Natural History, for errors once in print become permanent, and are not unfrequently widely spread by writers copying one another, instead of referring to the original source. There are innumerable instances of this nature bearing on my own labours, and as it is now thirty years since the first genus of Dytiscidæ was illustrated in my 'British Entomology,' and many entomologists in the country may not have access to the sixteen volumes, I shall refer to the nine genera of that family, with the figures given, adding such corrections as have been considered necessary by subsequent investigations. I hope also that the localities I shall furnish may render the *chasse* of the collector satisfactory and successful.

According to my arrangement, I commence with

HALIPLUS, Latr.

1. *H. elevatus*, Panz. In September, 1810, the Rev. J. Burrell took me to a little clear running brook at Letheringsett to show me the locality of this pretty and at that time rare species; we found in company with it *Colymbetes vitreus* and *C. maculatus*. These are all more abundant in May.

2. *H. ferrugineus*, Payk., Curt. Brit. Ent. pl. 730. This is the *D. fulvus* of Fabricius; "Paykull however gave the name of *ferrugineus* to this *Haliplus* before Fabricius and Marsham noticed it," vide *Brit. Ent.* fol. 730.

CNEMIDOTUS, Ill.

3. *C. cæsus*, Duft.; *D. flavicollis*, Marsh. I remember taking this curious insect in the vicinity of Norwich, but subsequently I used to

find it in the ditches of Battersea Fields, which were, thirty years back, one of the finest localities for insects of all orders in the neighbourhood of London.

PÆLOBIUS, Schön.

4. *P. Hermannii, Fab.* I do not find any localities of this fine species recorded by Mr. Clark. I have generally found it in ponds in Epping Forest and on Hampstead Heath, the beginning of April and again in August; it also occurs on Wandsworth Common, preferring clay-pits into which the leaves of trees fall in the autumn; it used also to be taken in Copenhagen Fields, on the spot which is now transformed into the Cattle Market.

HYPHIDRUS, Ill.

5. *H. variegatus* of Stephens is merely a common variety of *H. ovatus*, as indicated by Mr. Clark. The *H. variegatus* of Illiger is a very distinct species, only inhabiting the South of Europe and Northern Africa.

HYGROTUS, Steph.

When I gave the characters of this group in 1835, I expressed a doubt of the necessity of separating it generically from *Hydroporus*, and this opinion prevails on the Continent. As, however, the labrum and labial palpi are very different, at least in *H. inæqualis*, if these differences extend to the other species, they might very advantageously form a section of the genus *Hydroporus*.

6. *H. bisulcatus, Curt. Ann. Nat. Hist. v. 5, p. 276.* Of this curious little beetle I have a coloured drawing, and it was described by me in the 'Annals,' in June, 1840. "It was taken on Cambridge Fens by the Rev. J. L. Brown."

7. *H. decoratus, Gyll., Curt. Brit. Ent. pl. 531.* This species stood for a long time unique in the British Museum. In July, 1834, it was found in abundance, and given to me by Mr. G. A. Wright, who met with it "on Askham Bog, near Tadcaster, in shallow puddles on the overflowed part of the Bog, where the grass was very thick: in these places water-insects of every description abounded, and the *H. decoratus* seemed exclusively confined to them," vide *Brit. Ent. fol. 531.*

HYDROPORUS, Clairv.

8. *H. Davisii, Curt. Brit. Ent. pl. 343.* This distinct species was one of the many rare water-beetles first introduced to British Ento-

mologists from the streams and ponds at Hebden Bridge, Yorkshire.

9. *H. nigrolineatus*, Schön. This appears to be the *H. 9-lineatus* of Rudd, and is well figured by Schönherr: it was unknown as a British species until I took a single specimen in Loch Fad, in the Isle of Bute, the end of July, 1825, and both sexes in the same lake the 9th of August, 1834; subsequently Mr. Dale and myself found it not uncommon in Woolmer Pond, four miles to the east of Selborne, Hants.

10. *H. latus*, Curt. Brit. Ent. fol. 343. Of this distinct species Mr. Dale first took a pair in his pond at Glanville's Wootton: I named it *H. latus* in the first edition of my 'Guide,' published in 1829, and described it in 'British Entomology.' Mr. Rudd subsequently compared specimens he had taken with the one in my cabinet, and of course adopted my name, and gave it to the author of the 'Manual:' it is consequently my *H. latus*, not Mr. Rudd's, although it is so given by Stephens and others. Some time after I described it, Sturm gave a very good figure of it, under the name of *H. ovatus*.

11. *H. cambriensis*, Curt. Brit. Ent. fol. 343. I know not what became of the specimen I described, taken in Wales; it might be a variety of *D. palustris*, Linn., which is the opinion of Mr. Murray; but I apprehend the specimens ticketed in Stephens' cabinet as *H. cambriensis* cannot be admitted to identify the unique specimen taken by Mr. Davis.

12. *H. planus*, Fab. The little species thus named by Marsham is quite different to the Fabrician insect, and may prove to be the *H. umbrosus* of Gyllenhal; but the specimens named *H. planus* in Stephens' cabinet are undoubtedly *H. melanocephalus*. On the 28th of April, 1842, I took a single specimen of an *Hydroporus*, closely allied to, if not the true *H. planus*: I found it under a stone in a pond used for sheep-washing on the downs near Wilton. This specimen, which I was enabled to compare with examples of the Fabrician species sent to me by the late Dr. Sturm, I conceived was identical with the true species; but Dr. Power having recently examined them, he is disposed to think that the Wilton and Fabrician *H. planus* are distinct: if such prove to be the case I wish to name my specimen *H. Harrisii*, in compliment to an esteemed friend who took a great interest in the 'British Entomology' during its progress through the press.

NOTERUS, *Clairv.*

13. *N. sparsus*, *Marsh., Curt. Brit. Ent.* pl. 236, and the difference between the two species are there carefully considered: in addition to the localities there given I may add another,—a pond at Newtown, Isle of Wight, where I took *N. sparsus*, on the 1st of July.

COLYMBETES, *Clairv.*

14. *C. consobrinus*, *Curt. Brit. Ent.* pl. 207. This is said to be the *D. Cicur* of Fabricius, a native of the Cape of Good Hope: it was introduced into my work, in consequence of Dr. Leach and Mr. Wilkin having purchased of Tuther, a dealer in Natural History, specimens which he assured them were taken near Wanstead House, Essex. The individual described and figured by me is in the cabinet of the Zoological Society, and Mr. Tuther received three guineas for that specimen!

15. *C. Grapii*, *Gyll.* This finely-sculptured insect I first discovered in ditches at Drayton, near Norwich, and at Horning, in May, 1810: it was at first confounded with *C. bipustulatus*, *Linn.*, and at that time entomologists were very loth to admit that they were distinct, until the difference of sculpture in the elytra was made manifest by a drawing which I possess,—a singular proof how much better Entomology is understood and the species investigated at the present time than it was forty years back.

HYDATICUS, *Leach.*

16. *H. cinereus*, *Linn., Curt. Brit. Ent.* pl. 95. The four species inhabiting Britain are very local, and one of them (*H. stagnalis*) is so rare that I have never been able to obtain a native example of it: whether the neighbourhood of Exeter and Netley will ever again furnish specimens I think very doubtful, and Wiltshire, it must be admitted, is a very ambiguous habitat. The other species are taken at Whittlesea Mere in June and July.

DYTISCUS, *Linn.*

As a proof of the importance of attending to the structure of the under side of the Dytiscidæ, not only in reference to generic characters, but in support of specific distinctions, I would call attention to the form of the furcate lobes of the metasternum in this genus, as exhibited in plate 99 of 'British Entomology,' to show

that this character is one of the best to facilitate a correct separation of the species.

17. *D. dimidiatus*, *Ill.*, *Curt. Brit. Ent.* pl. 99. This, which is the largest British species, has been taken principally at Whittlesea Mere, with *D. angustatus*, in ditches, in May, June and July.

18. *D. flavoscutellatus*, *Lat.*? was, by an error, printed "flavomaculatus" in the 'British Entomology:' it is the *D. circumflexus*, of Illiger, and the *D. excrucians* of Stephens in the 'Zoological Journal.'

CYBISTER, *Curtis*.

19. *C. Roëselii*, *Fab.*, *Curt. Brit. Ent.* pl. 151. The female figured by me was found on the 30th of September, 1826, in a puddle at Walton, Essex, by J. Dane, Esq., and is in the cabinet of Mr. J. H. Griesbach. Another specimen was obtained by Mr. Davis, in August, 1831, which had been thrown out of an oyster-basket in the City Road, and the beautiful female in my own collection was taken out of a pond with other *Dytisci* on the 12th of September, 1836, at Southchurch, Essex, and presented to me by Mr. C. Parsons, F.L.S.

ACILIUS, *Leach*.

20. *A. caliginosus*, *Curt. Brit. Ent.* pl. 63. This has been decided to be the *D. fasciatus* of Degeer, since I published the genus in 1825; it was discovered the previous year at Whittlesea Mere, by Mr. Chant in July.

The variety of *A. sulcatus* which I named *A. scoticus* was captured at Kinnordy, in Forfarshire, and presented to me by Sir Charles Lyell.

It is a curious fact that these water-beetles fly by day, when it is fine: an *Acilius* alighted on a carriage in which I was riding, near Heron Court, on the 15th of September, in the middle of the day, as we were driving towards Bourne-mouth, and at the same time a *Colymbetes* flew down.

In conclusion, I hope that other entomologists will assist in advancing our knowledge of this interesting tribe, by contributing such information as they may possess, and especially the localities and dates of capture of the rarer species.

JOHN CURTIS.

Belitha Villas, Barnsbury Park,

October 18, 1855.

Note on Melolontha Hippocastani.—A larger number of specimens of *M. Hippocastani* has this year come into my possession than during any previous one; but my information is too limited to enable me to determine whether the greater abundance has been owing to a season more favourable to their development or to a more productive locality having been examined. My friend Mr. Burgess, who obtained two or three specimens for me last year, kindly engaged to watch for the appearance of the insect this summer in the neighbourhood of Doune Castle, Stirlingshire; and during the last week of May and the first week of June he succeeded in procuring many fine specimens, not a few of which are now in the cabinets of friends in the South. In other years the beetle has appeared in the beginning of May. I have this season, for the first time, a specimen from Ayrshire, where also *M. vulgaris* is said by Mr. Rennie to occur. My oldest specimens are from Cudzow Forest, amongst whose noble oaks the *Urus scoticus* still leads a half-savage life: the old gardener who collected them there twenty or thirty years ago, when his activity began to fail called in the aid of a canine assistant, which caught them as they rose from the grass at dusk to career among the trees during the night, thereby increasing the number, without, however, improving the quality of his master's specimens. I am here strongly tempted to remark, that many other species sent me in exchange by correspondents in previous years seem to have been taken by terriers also, contrasting as they do most painfully with *unmutilated* specimens that come through the hands of true entomological taste and tact. I have been much struck by the difference in size of all the Scotch specimens I have seen, compared with a couple of Continental ones in my possession. The latter do not exceed $9\frac{1}{2}$ lines in length and $4\frac{3}{4}$ in breadth, while the former are from 11 to $12\frac{1}{2}$ in length and $5\frac{3}{4}$ to 6 in breadth: most of my females singly outweigh both the Continental specimens. It would be interesting to know whether the sizes indicated above generally prevail in the respective latitudes.—*Robert Hislop; Blair Lodge, Falkirk, October 30, 1855.*

Entomological Society and Museum at Melbourne.—When I last saw you in England you expressed a desire that I would sometimes write to you on the subject of Natural History, and I have much regretted that circumstances have prevented me from doing so as I could have wished: you are, however, I am sure, quite aware of the many difficulties which rise up in the path of every new arrival in a colony, and more particularly in that of Australia. Since I have been a resident here I have been able to devote only a very limited portion of my time to my favourite pursuit, and have thus been prevented from maintaining a correspondence with many friends at home (yourself among the number) upon the subjects which are mutually interesting to us. Things are, however, gradually—I may almost say rapidly—settling down to a condition similar to that of the mother country, and consequent improvements in our social condition are every day witnessed: among these advancements I regard as the most important a rising desire among the colonists to investigate and develop the natural productions of their adopted country; and a very excellent Museum is in course of formation in Melbourne. In this establishment, however, the branch of Natural History in which I am most interested (Entomology) is—and, from various reasons, will be—totally neglected: this is a source of great regret both to myself and to many gentlemen here who are interested in this branch of natural science, and we have privately resolved upon the formation of an Entomological Society and Museum, the principal ends we shall have in view being the formation of as large a collection as

possible of the insects of New Holland, the description of new species, and the transmission of as many duplicates as possible to the various Entomological Societies in England, on the Continent and in America. For the proper carrying out of our objects, we most earnestly invite the assistance and co-operation of our friends at home; and I am deputed to write to as many as possible of the leading members of the Entomological Society, and request their advice and support. You are eminently qualified to be of great service to us, and I have presumed upon my slight acquaintance with you to write to you rather fully upon the matter. If you would inform me where and how it would be possible for us to obtain descriptions of the greatest number of known species, and would forward to me a copy of the Rules and Regulations of the Entomological Society of London, you would render us a most important service. Of course it is most desirable that we should know, *as far as possible*, what species have been described, as it would not be advisable to increase the number of synonyms; and a list of the publications in which Australian insects are figured or described, as far as could be given, would be highly valuable to us. I may mention to you that we have many hard-working practical entomologists here, and that correspondents are ready to assist our endeavours in Sydney, Van Dieman's Land, Adelaide and Swan River. I am myself about to start on a journey to the Clarence River, 700 miles north of Sydney, one of the objects of which will be the formation of an entomological collection. In Melbourne alone we already possess nearly 4000 species, my own collection numbering upwards of 2000; many of them, I believe, are undescribed, and more particularly this may apply to the smaller Coleoptera, which are very numerous in Victoria. I need hardly say to you that the field before us is a most extensive one, and must yield a productive harvest. We shall endeavour to publish a journal of our transactions every six months, or at least once in the year, and shall hold it as one of our most particular rules to transmit as many specimens as possible to any Societies desirous of obtaining them. I am of course aware that a vast number of the insects of this colony have long been known and described at home; but I am perfectly certain that we have not yet reached the threshold of our knowledge with regard to the whole, and I believe that the most efficient way to promote this desirable end is the establishment of a society such as that which, I am happy to say, is in a state of progress. A very old friend of yours, Mr. Christy, the engineer, is most warmly interested in the object, and is now naturalising in the district of the River Murray: he desired me to remember him most kindly to you: he has paid great attention to the Lepidoptera, and has figured a great number of species with their caterpillars. The Lepidoptera known to the Melbourne entomologists, as far as I can ascertain, at present number about 700 or 800 species, and most of these have been obtained within a comparatively very short distance of the city. I may observe that of all the orders of insects the Lepidoptera are the fewest in individuals: of butterflies only twenty-eight species are known to us, and these have mostly been obtained in the open spaces on mountain ranges: I am speaking now of the Melbourne district only, as on the Sydney side diurnal Lepidoptera are more frequent than with us: our most common species is a *Cynthia*, very closely allied to *C. Cardui*, and, as far as I can judge, identical with it; I have not, however, been able to compare it with a British specimen. You mentioned to me that you were desirous of obtaining specimens of the Longicorns of New Holland; I have collected a great number for you, but I shall not forward them until after my return from the Clarence, as I hope in my journey to find some new and beautiful species. In the meantime, if you will favour me with

any information you may deem useful to us in the formation of our Society, and mention our intention to any of your friends, you will greatly oblige me.—*Henry Edwards; Merrivale, Merri Merri Creek, near Melbourne, Victoria, July 14, 1855.*

The Vinegar Polype.—I cannot regret having sent so long an extract from Huc's 'Travels' relative to the "Tsou-no-dze," as it has elicited remarks from that accurate naturalist, Jonathan Couch, who, on his grand black cliffs at Polperro, allows few denizens of air or sea to escape his observation: he writes to me that he has an opportunity for examining what he supposes to be analogous to the Chinese polype of the Yellow Sea, and that, kept in water not salt, it for some months has furnished a supply of vinegar: he believes it to be a species of Tremella (or Palmella of Harvey), living in water, and at certain periods multiplying by foliations or off-shoots. When he saw the parent plant it was lying in a reddish turbid fluid, having a strong smell of vinegar. He thus describes some of the off-shoots subsequently sent to him:—"When I proceeded to examine the contents of the bottle presented to me, I perceived in it, near the bottom, a disk, which I had no doubt of being one of the so-called plants; and on closer scrutiny I discovered one or two more. I then poured the whole into a bowl, and found no less than four. The largest was about the size of a large breakfast-cup and the thickness of a penny-piece, perfectly circular (although not made so by the containing vessel), and it was so heavy as to fall to the bottom of the fluid in the bowl. The second disk was also circular, of the size of a half-penny and the thickness of a penny. The third was also of the same circumference, but much thicker and cup-shaped—I do not mean hollow or excavated, but resembling a mass of jelly or metal solidified in a cup. The fourth was about the same circumference as the two last named, but perhaps four inches long, and with circular indentations, which made it appear like a number of disks united together. Still, however, they were not evenly united, but, viewed on one side only, bore some resemblance to a slightly cut screw. The skin of the last specimen hung loosely about it, as did that of the large original specimen when I inspected it. It appeared to me that this pellicle ought to be removed, but as yet I have not ventured to do it." This account seems to withdraw the so-called "polype" from the domain of Zoology, in which Huc had placed its congener, but its power of continuously secreting acid, when immersed in a bowl of water, appears to be a novelty in vegetable organisms, and it is a mystery whence it can procure carbon sufficient to form vinegar, when the supply of available carbonic acid gas must be very small.—*Charles Fox; Trebah, near Falmouth, October 10, 1855.*

NOTICES OF NEW BOOKS.

'Quarterly Journal of Microscopical Science, including the Transactions of the Microscopical Society of London.' Edited by EDWIN LANKESTER, M.D., F.R.S., F.L.S., and GEORGE BUSK, F.R.C.S.E., F.R.S., F.L.S. London: Highley. No. XII., dated July, 1855; price 4s.

The contents of the July number are as under:—

'Observations on Cosmarium margaritifera and other Desmidiæ.' By Mrs. Herbert Thomas, of Bristol.

'Address of the President at the Annual Meeting of the Microscopical Society,' February 28, 1855.

'An Account of Mr. Peter's Machine for Microscopic Writing.' By R. J. Farrants, Esq., F.R.C.S.

'On the Illumination of Objects by Polarized Light or on a Dark Field.' By John Furze.

'On the Structure of the Cutaneous Follicles of the Toad, with some Experiments and Observations upon the Nature and alleged Venomous Properties of their Secretion.' By George Rainey, M.R.C.S., Lecturer on Anatomy, &c., St. Thomas's Hospital.

'On the Reproductive Organs of certain Fungi.' By Frederick Currey, Esq., M.A.

'On Ciliary Action as the Cause of the Circulation in the Cells of Plants.' By Ferguson Branson, M.D., Sheffield.

'Observations on the Circulation of the Sap in the Leaf-Cells of *Anacharis Alsinastrum*.' By F. H. Wenham.

'On the Cellulose (in Animals) Question.' By R. Virchow. [Translated from *Archiv f. Pathol. Anatomie*, ii. *Physiologie*, &c., vol. viii., H 1, p. 140.]

'On the Action of a Concentrated Solution of Urea upon the Blood-cells.' By A. Kolliker. [Translated from *Zeitsch. f. Wiss. Zool.* vol. vii. p. 183.]

'Notice respecting the Occurrence of Lymph-Corpuscles in the commencements of the Lymphatic Vessels.' By A. Kolliker. [Translated from *Zeitsch. f. Wiss. Zool.* vol. vii. p. 182.]

'On the Influence of Caustic Alkalies upon the Motions of the Spermatic Filaments.' By A. Kolliker. [Translated from Siebold and Kollik. *Zeitsch. f. W. Zool.* vol. vii. p. 181, March 26, 1855.]

'On the Restoration of the Motions of the Spermatozoids of the Mammalia.' By MM. Moleschott and J. C. Ricchetti. [Translated from the *Comptes Rendus*, No. 13, March 26, 1855.]

'On the Vitality and Development of the Spermatic Filaments.' By A. Kolliker. [Translated from the *Verhand d. Phys. med. Gesellch in Wurzb.* Bd. vi. 1855.]

Notes and Correspondence:—Reply to some Remarks of Mr. Wenham on the Difficulty of Discovering the Markings or Structure of a Severe Test when mounted in Canada Balsam; by Professor J. Bailey. Aperture of Object-Glasses in relation to Objects in Canada Balsam; by F. H. Wenham. Microscopical Conversazioni. Cheap Microscopes. On "Species" of Diatomaceæ. On a New Locality for Microscopic Test-Objects; by Professor J. Bailey. Memorandum on Flies' Feet; by John Hepworth. On Finders. Memoranda on the

Employment of Artificial Sea-water in Marine Aquaria; by William Alford Lloyd.

Proceedings of Societies :—Royal, Stoke Newington Natural History and Scientific.

Zoophytology.

Occurrence of Trochilium scolæformis in Wales.—Mr. Ashworth, already favourably known to entomologists as the discoverer of a new Noctua, *Agrotis Ashworthii* of Doubleday (Zool. 4749), is the fortunate captor of a large and beautiful *Trochilium* altogether new to this country. This insect is the *Sphinx scolæformis* of Borkhausen, subsequently described as *Sesia scolæformis* by Laspeyres, who records its having been taken at Darmstadt in May on the blossoms of *Rhamnus Frangula*: both these authors, however, appear to have only been acquainted with the female, whereas Mr. Ashworth has taken both sexes: this is probably the species of which Mr. Ashworth previously recorded the capture (Zool. 4814), under the name of *Trochilium Sphegiforme*. I append a description, which may serve as an *Addendum* to my 'Monographia *Ægeriarum Angliæ*,' published in the first volume of the 'Entomological Magazine.'

TROCHILIUM SCOLÆFORMIS.

Antennæ maris nigræ, feminae, ante apicem, late albicantes: thoracis dorsum nigrum, lineis 2 obliquis, longitudinalibus, flavescentibus, signatum: abdomen nigrum, fasciis 2 flavis barbâque anali crocæa ornatum. (Long. corp. .75 unc. Alarum dilat. 1.3 unc.)

Sphinx scolæformis, Borkhausen, Naturg. Europ. Schmet. ii. 173, tab. figs. 2 & 3 fem.

Sesia scolæformis, Laspeyres, Sesia Europea, No. VI. p. 13, tab. figs. 1 & 2 fem.

Head black, and together with all other black parts, having an iridescent tint; there is a slender whitish line before the eyes, and an indistinct ring of pale yellow round the neck; palpi black above, yellow on the sides and beneath, except the apical joint, which is altogether black; antennæ of the male black and ciliated, of the female black and simple, with a long whitish space on the apical portion extending almost to the apex: dorsum of the thorax black with two lateral narrow oblique longitudinal yellow lines; pectus with a large quadrate yellow spot on each side: abdomen black above with two yellow belts, the first basal and narrow, the second median and broad; beneath there is one yellow belt, this is median and occupies an entire segment; the sides of the abdomen are also ornamented with somewhat obscure tufts of yellow scales; and its apex with a tuft, which is bright ferruginous both above and below: wings hyaline, the anterior pair with the veins, a median costal spot, and the broad apical lunate fascia and cilia black, the lower margin of the wing gilt with scattered yellow scales; posterior wings with the veins, a median costal spot, and the long cilia black; beneath, the veins and opaque markings of the wings are so thickly sprinkled with yellow scales as to have a glittering golden appearance: legs black with yellow markings; the femora have a yellowish linear mark in front; the tibiæ are almost clothed with yellow scales, except at the apex; the basal joint of the tarsi is also yellowish.

Both sexes taken by Mr. Ashworth at Bryn Hyfryd, near Llangollen, in North Wales.—Edward Newman; London, November 6, 1856.

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To Entomologists.

MR. FOXCROFT begs to return his sincere thanks to the Trustees of
the British Museum, the Nobility, Gentry and Clergymen, and also particularly
to the Members of the Entomological Society, for the patronage he has received for a
number of years, and takes the liberty of informing them and others that he intends
making another journey into Scotland, for the purpose of collecting Insects during the
summer of 1856: from the 15th of March to the beginning of July, he purposes devoting
to collecting in Scotland. Mr. Foxcroft intends spending the rest of the season in
Wales and parts of England to the end of October, making the Season seven months and
half. Mr. Foxcroft, to enable him to carry out this plan, wishes to raise a sufficient
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